

Exhibit D  
'tzlas01.log'

```

SQL> @tzlbacl4
SQL>
SQL> CONNECT SCOTT/TIGER
Connected.
SQL>
SQL> CREATE TABLE abc
  2  (COL1 VARCHAR2(45));

Table created.

SQL>
SQL> CREATE TABLE jing
  2  (COL1 VARCHAR2(45));

Table created.

SQL>
SQL> GRANT ALL ON abc TO LBACSYS;

Grant succeeded.

SQL>
SQL> -- This should not be allowed as the user is SCOTT
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('simple','lbac$test1','raghu');
BEGIN LBAC_SYSDBA.CREATE_POLICY('simple','lbac$test1','raghu'); END;

*
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00201: identifier 'LBACSYS.LBAC_SYSDBA' must be declared
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored

SQL>
SQL> CONNECT LBACSYS/LBACSYS
Connected.
SQL>
SQL> -- Create policies in database
SQL>
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('simple','lbac$test1','raghu');

PL/SQL procedure successfully completed.

SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('complex','lbac$test1','rghu');

PL/SQL procedure successfully completed.

SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('sile','lbac$test1');

PL/SQL procedure successfully completed.

SQL>
SQL> -- Error Conditions
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('complex','lbac$test1','aghu');
BEGIN LBAC_SYSDBA.CREATE_POLICY('complex','lbac$test1','aghu'); END;

```

```

*
ERROR at line 1:
ORA-12447: policy role already exists for policy complex
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-01921: role name 'COMPLEX_DBA' conflicts with another user or role name
ORA-06512: at line 1

```

```

SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('dummy','lbac$test1');
BEGIN LBAC_SYSDBA.CREATE_POLICY('dummy','lbac$test1'); END;

```

```

*
ERROR at line 1:
ORA-12442: policy column "TESTLABEL" already used by an existing policy
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line .*

```

```

SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('new','lbac$test1','raghu');
BEGIN LBAC_SYSDBA.CREATE_POLICY('new','lbac$test1','raghu'); END;

```

```

*
ERROR at line 1:
ORA-12442: policy column "RAGHU" already used by an existing policy
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line .*

```

```

SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('new123','lbac$ttl','xyz');
BEGIN LBAC_SYSDBA.CREATE_POLICY('new123','lbac$ttl','xyz'); END;

```

```

*
ERROR at line 1:
ORA-12412: policy package lbac$ttl is not installed
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line .*

```

```

SQL>
SQL> -- This should not fail ...
SQL> EXECUTE
LBAC_SYSDBA.CREATE_POLICY('abcdefghijklmnopqrstuvwxy1234','lbac$test1','fdf');

```

PL/SQL procedure successfully completed.

```

SQL>
SQL> EXECUTE
LBAC_SYSDBA.CREATE_POLICY('abcdefghijklmnopqrstuvwxy','lbac$test1','fdf');
BEGIN
LBAC_SYSDBA.CREATE_POLICY('abcdefghijklmnopqrstuvwxy','lbac$test1','fdf'); END;

```

```

*
ERROR at line 1:
ORA-12447: policy role already exists for policy abcdefghijklmnopqrstuvwxy
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0

```

```
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-01921: role name 'ABCDEFGHIJKLMNOPQRSTUVWXYZ_DBA' conflicts with another
user or role name
ORA-06512: at line 1
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('india','lbac$test1','fdfeffg');
```

```
PL/SQL procedure successfully completed.
```

```
SQL>
```

```
SQL> -- Add 5 policies due to max_label_policies default increase from 5 to 10.
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('ab1','lbac$test1','vc1');
```

```
PL/SQL procedure successfully completed.
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('ab2','lbac$test1','vc2');
```

```
PL/SQL procedure successfully completed.
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('ab3','lbac$test1','vc3');
```

```
PL/SQL procedure successfully completed.
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('ab4','lbac$test1','vc4');
```

```
PL/SQL procedure successfully completed.
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('ab5','lbac$test1','vc5');
```

```
PL/SQL procedure successfully completed.
```

```
SQL>
```

```
SQL> -- Error Conditions
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('abc','lbac$test1','vcx');
```

```
BEGIN LBAC_SYSDBA.CREATE_POLICY('abc','lbac$test1','vcx'); END;
```

```
*
```

```
ERROR at line 1:
```

```
ORA-12422: max policies exceeded
```

```
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
```

```
ORA-06512: at line 1
```

```
SQL> EXECUTE LBAC_SYSDBA.CREATE_POLICY('simple');
```

```
BEGIN LBAC_SYSDBA.CREATE_POLICY('simple'); END;
```

```
*
```

```
ERROR at line 1:
```

```
ORA-06550: line 1, column 7:
```

```
PLS-00306: wrong number or types of arguments in call to 'CREATE_POLICY'
```

```
ORA-06550: line 1, column 7:
```

```
PL/SQL: Statement ignored
```

```

SQL> EXECUTE
LBAC_SYSDBA.CREATE_POLICY('abcdefghijklmnopqrstuvwxyz12345','lbac$test1','ragu')
;
BEGIN
LBAC_SYSDBA.CREATE_POLICY('abcdefghijklmnopqrstuvwxyz12345','lbac$test1','ragu')
; END;

```

```

*
ERROR at line 1:
ORA-12447: policy role already exists for policy
abcdefghijklmnopqrstuvwxyz12345
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-01921: role name 'ABCDEFGHIJKLMNOPQRSTUVWXYZ_DBA' conflicts with another
user or role name
ORA-06512: at line 1

```

```

SQL>
SQL> -- Drop extra 5 policies from above.
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('ab1');

```

PL/SQL procedure successfully completed.

```

SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('ab2');

```

PL/SQL procedure successfully completed.

```

SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('ab3');

```

PL/SQL procedure successfully completed.

```

SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('ab4');

```

PL/SQL procedure successfully completed.

```

SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('ab5');

```

PL/SQL procedure successfully completed.

```

SQL>
SQL> -- Let us check the policies created ...

```

```

SQL> SELECT *
      2 FROM DBA_LBAC_POLICIES
      3 ORDER BY POLICY_NAME;

```

POLICY_NAME	COLUMN_NAME
-----	-----
PACKAGE	BIN_SIZE STATUS
-----	-----
DEFAULT_FORMAT	POLICY_FORMAT
-----	-----
POLICY_OPTIONS	
-----	-----
DATABASE_LABELS	
-----	-----
ABCDEFGHIJKLMNOPQRSTUVWXYZ1234	FDF

LBAC\$TEST1 1 ENABLED

COMPLEX RGHU  
LBAC\$TEST1 1 ENABLED

INDIA FDFEFG

POLICY\_NAME COLUMN\_NAME

-----  
PACKAGE BIN\_SIZE STATUS

-----  
DEFAULT\_FORMAT POLICY\_FORMAT

-----  
POLICY\_OPTIONS

-----  
DATABASE\_LABELS

-----  
LBAC\$TEST1 1 ENABLED

SILE TESTLABEL  
LBAC\$TEST1 1 ENABLED

SIMPLE RAGHU  
LBAC\$TEST1 1 ENABLED

POLICY\_NAME COLUMN\_NAME

-----  
PACKAGE BIN\_SIZE STATUS

-----  
DEFAULT\_FORMAT POLICY\_FORMAT

-----  
POLICY\_OPTIONS

-----  
DATABASE\_LABELS

5 rows selected.

SQL>

SQL> EXECUTE LBAC\_SYSDBA.ENABLE\_POLICY('simple');

PL/SQL procedure successfully completed.

SQL>

SQL> -- The basic objective from now on is to test the enable/disable procedures

...

SQL>

SQL> EXECUTE LBAC\_LABEL\_ADMIN.CREATE\_LABEL('simple',1,'A,B', TRUE);

PL/SQL procedure successfully completed.

SQL> EXECUTE LBAC\_LABEL\_ADMIN.CREATE\_LABEL('abcdefghijklmnopqrstuvwxyz',2,'A', TRUE);

BEGIN LBAC\_LABEL\_ADMIN.CREATE\_LABEL('abcdefghijklmnopqrstuvwxyz',2,'A', TRUE);  
END;

\*

ERROR at line 1:

ORA-12416: policy abcdefghijklmnopqrstuvwxyz not found

ORA-06512: at "LBACSYS.LBAC\_CACHE", line .\*

ORA-06512: at "LBACSYS.LBAC\_LABEL\_ADMIN", line .\*

ORA-06512: at line 1

SQL>

SQL> EXECUTE

LBAC\_USER\_ADMIN.SET\_USER\_LABELS('abcdefghijklmnopqrstuvwxyz','SCOTT',TO\_LABEL\_LIST.FROM\_CHAR('abcdefghijklmnopqrstuvwxyz',NULL,'A'));

BEGIN

LBAC\_USER\_ADMIN.SET\_USER\_LABELS('abcdefghijklmnopqrstuvwxyz','SCOTT',TO\_LABEL\_LIST.FROM\_CHAR('abcdefghijklmnopqrstuvwxyz',NULL,'A')); END;

\*

ERROR at line 1:

ORA-01405: fetched column value is NULL

SQL>

SQL> SELECT \*

2 FROM DBA\_LBAC\_USER\_LABELS ORDER BY USER\_NAME, POLICY\_NAME;

no rows selected

SQL>

SQL> -- Error Conditions

SQL> EXECUTE

LBAC\_POLICY\_ADMIN.APPLY\_TABLE\_POLICY('abcdefghijklmnopqrstuvwxyz','SCOTT','abc')  
;

BEGIN

LBAC\_POLICY\_ADMIN.APPLY\_TABLE\_POLICY('abcdefghijklmnopqrstuvwxyz','SCOTT','abc')  
; END;

\*

ERROR at line 1:

ORA-12416: policy abcdefghijklmnopqrstuvwxyz not found

ORA-06512: at "LBACSYS.LBAC\_CACHE", line .\*

ORA-06512: at "LBACSYS.LBAC\_POLICY\_ADMIN", line .\*

ORA-06512: at line 1

```

SQL>
SQL> -- OK now
SQL> EXECUTE
LBAC_POLICY_ADMIN.APPLY_TABLE_POLICY('complex','SCOTT','abc','NO_CONTROL');

PL/SQL procedure successfully completed.

SQL> EXECUTE
LBAC_POLICY_ADMIN.APPLY_TABLE_POLICY('complex','SCOTT','jing','NO_CONTROL');

PL/SQL procedure successfully completed.

SQL> EXECUTE
LBAC_POLICY_ADMIN.APPLY_TABLE_POLICY('simple','SCOTT','abc','DELETE_CONTROL');

PL/SQL procedure successfully completed.

SQL> EXECUTE
LBAC_POLICY_ADMIN.APPLY_TABLE_POLICY('simple','SCOTT','EMP','DELETE_CONTROL');

PL/SQL procedure successfully completed.

SQL> EXECUTE
LBAC_POLICY_ADMIN.APPLY_TABLE_POLICY('sile','SCOTT','jing','DELETE_CONTROL');

PL/SQL procedure successfully completed.

SQL>
SQL> CONNECT SCOTT/TIGER
Connected.
SQL>
SQL> DESC abc;

```

Name	Null?	Type
COL1		VARCHAR2(45)
RGHU		LBACSYS.LBAC_LABEL
RAGHU		LBACSYS.LBAC_LABEL

```

SQL>
SQL> INSERT INTO abc(col1)
  2  VALUES('fdfd');

1 row created.

SQL>
SQL> UPDATE abc
  2  SET raghu = LBACSYS.TO_LBAC_LABEL('simple','A,B');

1 row updated.

SQL>
SQL> -- Should not allow ...
SQL> DELETE FROM abc;
DELETE FROM abc
*
```



```
ERROR at line 1:
ORA-12406: unauthorized SQL statement for policy SIMPLE
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0
ORA-06512: at "LBACSYS.LBAC.*
ORA-04088: error during execution of trigger 'LBACSYS.LBAC.*
```

```
SQL>
SQL> SELECT col1,LABEL_TO_CHAR(raghu)
      2 FROM abc
      3 ORDER BY col1;
```

```
COL1
```

```
-----
LABEL_TO_CHAR(RAGHU)
-----
```

```
fdfd
```

```
A,B
```

```
1 row selected.
```

```
SQL>
SQL> -- Error Condition
SQL> EXECUTE LBAC_SYSDBA.DISABLE_POLICY('simple');
BEGIN LBAC_SYSDBA.DISABLE_POLICY('simple'); END;
```

```
*
```

```
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00201: identifier 'LBACSYS.LBAC_SYSDBA' must be declared
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored
```

```
SQL>
SQL> CONNECT LBACSYS/LBACSYS
Connected.
SQL>
SQL> EXECUTE LBAC_SYSDBA.DISABLE_POLICY('simple');
```

```
PL/SQL procedure successfully completed.
```

```
SQL>
SQL> -- Error Conditions ...
SQL> EXECUTE LBAC_SYSDBA.DISABLE_POLICY('abcdefghijklmnopqrstuvwxyzf');
BEGIN LBAC_SYSDBA.DISABLE_POLICY('abcdefghijklmnopqrstuvwxyzf'); END;
```

```
*
```

```
ERROR at line 1:
ORA-12416: policy abcdefghijklmnopqrstuvwxyzf not found
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line 1
```

```
SQL> EXECUTE LBAC_SYSDBA.DISABLE_POLICY('abcdefghijklmnopqrstuvwxy', 'fdf');
BEGIN LBAC_SYSDBA.DISABLE_POLICY('abcdefghijklmnopqrstuvwxy', 'fdf'); END;
```

```
*
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00306: wrong number or types of arguments in call to 'DISABLE_POLICY'
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored
```

```
SQL>
SQL> -- Should not delete as the disable will be effective from next session
only
SQL> DELETE FROM SCOTT.abc;
```

1 row deleted.

```
SQL>
SQL> CONNECT SCOTT/TIGER
Connected.
SQL>
SQL> SELECT coll, LABEL_TO_CHAR(raghu)
      2 FROM abc
      3 ORDER BY coll;
```

no rows selected

```
SQL>
SQL> -- Should delete now as the policy is disabled ...
SQL> DELETE FROM abc;
```

0 rows deleted.

```
SQL>
SQL> SELECT coll, LABEL_TO_CHAR(raghu)
      2 FROM abc
      3 ORDER BY coll;
```

no rows selected

```
SQL>
SQL> INSERT INTO abc(coll)
      2 VALUES('123233');
```

1 row created.

```
SQL>
SQL> -- Error Condition ...
SQL> EXECUTE LBAC_SYSDBA.ENABLE_POLICY('simple');
BEGIN LBAC_SYSDBA.ENABLE_POLICY('simple'); END;
```

```
*
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00201: identifier 'LBACSYS.LBAC_SYSDBA' must be declared
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored
```

```

SQL>
SQL> CONNECT LBACSYS/LBACSYS
Connected.
SQL>
SQL> EXECUTE LBAC_SYSDBA.ENABLE_POLICY('simple');

PL/SQL procedure successfully completed.

SQL>
SQL> -- Error Conditions ...
SQL> EXECUTE LBAC_SYSDBA.ENABLE_POLICY('simpler1');
BEGIN LBAC_SYSDBA.ENABLE_POLICY('simpler1'); END;

*
ERROR at line 1:
ORA-12416: policy simpler1 not found
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line 1

SQL> EXECUTE LBAC_SYSDBA.ENABLE_POLICY('simple',FALSE);
BEGIN LBAC_SYSDBA.ENABLE_POLICY('simple',FALSE); END;

*
ERROR at line 1:
ORA-06550: line 1, column 7:
PLS-00306: wrong number or types of arguments in call to 'ENABLE_POLICY'
ORA-06550: line 1, column 7:
PL/SQL: Statement ignored

SQL>
SQL> -- Should delete now as the enable will be effective only from new session
SQL> DELETE FROM SCOTT.abc;

1 row deleted.

SQL>
SQL> CONNECT SCOTT/TIGER
Connected.
SQL>
SQL> -- Expecting no rows ...
SQL> SELECT coll,LABEL_TO_CHAR(raghu)
      2 FROM abc
      3 ORDER BY coll;

no rows selected

SQL>
SQL> INSERT INTO abc(coll)
      2 VALUES('1232');

1 row created.

SQL>
SQL> -- Delete should fail ...

```

```
SQL> DELETE FROM abc;
DELETE FROM abc
      *
ERROR at line 1:
ORA-12406: unauthorized SQL statement for policy SIMPLE
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0
ORA-06512: at "LBACSYS.LBAC.*"
ORA-04088: error during execution of trigger 'LBACSYS.LBAC.*'
```

```
SQL>
SQL> SELECT col1, LABEL_TO_CHAR(raghu)
      2 FROM abc
      3 ORDER BY col1;
```

COL1

-----  
 LABEL\_TO\_CHAR(RAGHU)  
 -----

1232

1 row selected.

```
SQL>
SQL> CONNECT LBACSYS/LBACSYS
Connected.
SQL>
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('simple', TRUE);

PL/SQL procedure successfully completed.

SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('complex', FALSE);
```

PL/SQL procedure successfully completed.

```
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('sile');
```

PL/SQL procedure successfully completed.

```
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('abcdefghijklmnopqrstuvwxy1234');
```

PL/SQL procedure successfully completed.

```
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('abcdefghijklmnopqrstuvwxy');
BEGIN LBAC_SYSDBA.DROP_POLICY('abcdefghijklmnopqrstuvwxy'); END;
```

```
*
ERROR at line 1:
ORA-12416: policy abcdefghijklmnopqrstuvwxy not found
ORA-06512: at "LBACSYS.LBAC_STANDARD", line 0
ORA-06512: at "LBACSYS.LBAC_SYSDBA", line .*
ORA-06512: at line 1
```

```
SQL> EXECUTE LBAC_SYSDBA.DROP_POLICY('india');
```

PL/SQL procedure successfully completed.

SQL>

SQL> -- Error Conditions

SQL> EXECUTE LBAC\_SYSDBA.DROP\_POLICY('adfd');

BEGIN LBAC\_SYSDBA.DROP\_POLICY('adfd'); END;

\*

ERROR at line 1:

ORA-12416: policy adfd not found

ORA-06512: at "LBACSYS.LBAC\_STANDARD", line 0

ORA-06512: at "LBACSYS.LBAC\_SYSDBA", line .\*

ORA-06512: at line 1

SQL> EXECUTE LBAC\_SYSDBA.DROP\_POLICY('simple',XYZ);

BEGIN LBAC\_SYSDBA.DROP\_POLICY('simple',XYZ); END;

\*

ERROR at line 1:

ORA-06550: line 1, column 40:

PLS-00201: identifier 'XYZ' must be declared

ORA-06550: line 1, column 7:

PL/SQL: Statement ignored

SQL>

SQL> SELECT \*

2 FROM DBA\_LBAC\_POLICIES

3 ORDER BY POLICY\_NAME;

no rows selected

SQL>

SQL> CONNECT SCOTT/TIGER

Connected.

SQL>

SQL> -- Simple policy was applied on two tables (abc,emp) the hidden column should

SQL> -- be dropped as the TRUE option is set; Policy complex was applied to

SQL> -- two tables(abc,jing) and hidden column should not be dropped as the option

SQL> -- was set to FALSE; Policy sile was applied to a table (jing) and the hidden

SQL> -- column should not be dropped as the default option is FALSE.

SQL>

SQL> DESC abc;

Name

Null?

Type

-----

COL1

VARCHAR2(45)

RGHU

LBACSYS.LBAC\_LABEL

SQL> DESC jing;

Name

Null?

Type

-----

COL1

VARCHAR2(45)

RGHU  
TESTLABEL

LBACSYS.LBAC\_LABEL  
LBACSYS.LBAC\_LABEL

SQL> DESC EMP;

Name	Null?	Type
EMPNO	NOT NULL	NUMBER (4)
ENAME		VARCHAR2 (10)
JOB		VARCHAR2 (9)
MGR		NUMBER (4)
HIREDATE		DATE
SAL		NUMBER (7,2)
COMM		NUMBER (7,2)
DEPTNO		NUMBER (2)

SQL>

SQL> DROP TABLE abc;

Table dropped.

SQL> DROP TABLE jing;

Table dropped.

SQL>

SQL> SET ECHO OFF